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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,856	05/17/2006	Hiroaki Miyamoto	Q94999	8091

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ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,856	MIYAMOTO, HIROAKI	
	Examiner	Art Unit	
	KATHY WANG-HURST	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/17/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 19 is rejected under 35 USC 101 because the claimed invention is directed to non-statutory subject matter. Claim 19 is directed to a computer program. To overcome this rejection, examiner suggests that any claims directed to the computer program be amended such that they embody the functional descriptive material on a computer-readable medium.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walls et al. (US 2004/0156315) in view of Sharma (US 7161909).

Regarding claims 1, 7, and 13, Walls discloses a data communication system and a method in which a packet transmission station transmits a reception acknowledgement signal in response to reception of a data frame from another packet station ([0032]), the system comprising means of controlling a transmission rate of the reception

acknowledgement signal based on the number of retransmissions of the data frame ([0036] when a large number of retransmission requests occur, decrease transmission rate by reducing number of retransmission requests. A retransmission request is a negative form of reception acknowledgement as indicated in [0032]).

Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the data transmission device may be a laptop, palmtop, a mobile phone and other portable communication device (col. 1 lines 45-47; col.1 lines 14-24). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication systems, as taught by Sharma (col. 1 lines 14-16), thus improve the flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Regarding claims 2, 8, and 14, Walls discloses the communication system and a method according to claim 1, wherein the means controls the transmission rate of the retransmission request based on the number of retransmissions of the data frame (([0036] when a large number of retransmission requests occur, decrease transmission rate by reducing retransmission request which is a negative form of reception acknowledgement). Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station.

Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the data transmission device may be a laptop, palmtop, a mobile phone and other portable communication device (col. 1 lines 45-47; col.1 lines 14-24). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication system, as taught by Sharma (col. 1 lines 14-16), thus improve the flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Regarding claims 3, 9 and 15, Walls discloses the data communication system according to claim 2, wherein the means makes the transmission rate lower than a current transmission rate when the number of retransmissions of the data frame is greater than a first predetermined value ([0038] [0036]). Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the data transmission device may be a laptop, palmtop, a mobile phone and other portable communication device (col. 1 lines 45-47; col.1 lines 14-24). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication system, as taught by Sharma (col. 1 lines 14-

16), thus improve the flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Regarding claim 4, 10 and 16, Walls discloses the data communication system according to any one of claims 1 to 3, wherein the means controls the transmission rate of the reception acknowledgement signal based on the number of successive successes for the data frame ([0032]; [0036]; [0039] it is equivalent of saying more packets are successfully received and therefore fewer retransmission requests are made). Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the data transmission device may be a laptop, palmtop, a mobile phone and other portable communication device (col. 1 lines 45-47; col.1 lines 14-24). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication system, as taught by Sharma (col. 1 lines 14-16), thus improve the flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Regarding claims 5, 11 and 17, Walls discloses the data communication system according to claim 4, wherein the means makes the transmission rate higher than the

current transmission rate when the number of retransmission requests is below a predetermined value ([0039] it is equivalent of saying more packets are successfully received and therefore fewer retransmission requests are made). Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the data transmission device may be a laptop, palmtop, a mobile phone and other portable communication device (col. 1 lines 45-47; col.1 lines 14-24). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication system, as taught by Sharma (col. 1 lines 14-16), thus improve the flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Regarding claims 6, 12, 18, 20-25, Walls discloses a generic communication system according to any one of claims 1 to 5 ([0003][0036]), but fails to disclose communication system is a wireless communication system wherein the wireless station and another wireless station are an access point and a mobile communication terminal in a wireless LAN system. Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the wireless station and another wireless station are an access point and a mobile communication terminal in a wireless LAN system (Fig. 1 and col. 3 lines 51-64). Therefore, it would have been obvious to a

person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication system, as taught by Sharma (col. 1 lines 14-16), thus improve the flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Regarding claim 19, Walls discloses a computer readable medium containing a program for use by or in connection with the instruction execution system ([0041]) that allows a computer to perform an operation of a packet transmission station that transmits a reception acknowledgement signal in response to a data frame transmitted from another packet transmission station, the program comprising a process of controlling a transmission rate of the reception acknowledgement signal based on the number of retransmissions of the data frame ([0036]). Walls fails to explicitly disclose the data communication system is a wireless communication system and packet transmission station is a wireless station. Sharma teaches a method and system for acknowledging the receipt of a transmitted data in a wireless LAN wherein the data transmission device may be a laptop, palmtop, a mobile phone and other portable communication device (col. 1 lines 45-47; col.1 lines 14-24). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Walls, and take a variety of computer network systems and make use of wireless communication system, as taught by Sharma (col. 1 lines 14-16), thus improve the

flexibility of the network and allow users to access a network wirelessly (col. 1 lines 16-24).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brooks et al. (US 6038606) discloses a method and apparatus for scheduling packet acknowledgements.

Ma et al. (US 7369498) discloses a congestion control method for a packet-switched network.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHY WANG-HURST/
Examiner, Art Unit 2617

/NICK CORSARO/

Supervisory Patent Examiner, Art Unit 2617